

IN THE CLAIMS:

- 1 1. (Previously Presented): A cover assembly for a microplate, said assembly comprising:
2 a layer of material shaped and dimensioned to removably seal a plurality of well openings
3 of said microplate;
4 a pressure plate disposed on said layer of material for dispersing a compressive force in a
5 generally uniform manner across said layer of material;
6 a cover having a top and first and second sides, said top shaped so as to generate said
7 compressive force when said cover is engaged with said microplate, said first and second sides
8 each including an inward projection for supporting a bottom edge of said microplate;
9 a plurality of vertical tabs extending downward from said projections; and
10 a plurality of recesses in said cover assembly that register with said tabs, whereby a plurality of
11 the cover assemblies can be stacked with the vertical tabs of each cover assembly extending
12 down into the recesses of a cover assembly that is disposed beneath.
- 1 2. (Previously Presented): The cover assembly as in claim 1 wherein said top and said pressure
2 plate each include one or more horizontal tabs extending generally parallel to said top and said
3 sides horizontal tabs enabling said cover to be engaged with or disengaged from said microplate
4 by a robotic system.
- 1 3. (Previously Presented): The cover assembly as in claim 1 wherein said first and second sides
2 of said cover include apertures which render at least portions of the side surfaces of said micro-
3 plate visible when said cover is engaged with said microplate.
- 1 4. (Canceled).

1 5. (Canceled).

1 6. (Previously Presented): The cover assembly of claim 1 wherein said pressure plate comprises
2 a generally rectangular piece of metal with robotic access features.

1 7. (Canceled).

1 8. (Canceled).

1 9. (Canceled).

1 10. (Canceled).

1 11. (Previously Presented): The cover assembly of claim 1 wherein said cover top includes a
2 central, longitudinally extending portion contacting said pressure plate and lateral portions ex-
3 tending upwardly from said central portion at their inner edges, said sides extending downwardly
4 from the outer edges of said lateral portions, whereby the lateral portions and the central portion
5 provide a resilient force that bears downward on said pressure plate and upward on the bottom
6 edges of said microplate.

1 12. (Previously Presented): The assembly of claim 1 including longitudinal tabs, extending
2 from said first and second sides, whereby said cover may be disengaged from or engaged with
3 said microplate by displacing said longitudinal tabs laterally outwardly or inwardly to move said
4 projections away from or beneath said bottom edges of said microplate.

1 13. (Previously Presented): A cover assembly for a microplate, said assembly comprising:
2 a layer of material shaped and dimensioned to removably seal a plurality of a micro-
3 plate's well openings;
4 a pressure plate disposed on said layer of material for dispersing a compressive force in a
5 generally uniform manner across said layer of material; and
6 a cover having a top and first and second sides, said top including a central, longitudi-
7 nally extending portion in contact with said pressure plate and lateral portions extending up-
8 wardly from central portion at their inner edges, said sides extending downwardly from the outer
9 edges of said planar portions and including projections that extend beneath bottom edges of said
10 microplate;
11 whereby said lateral portions and said central portion provide a resilient force that bears
12 downward on said pressure plate and upward on the bottom edges of said microplate.

1 14. (Previously Presented): The assembly of claim 13 including longitudinal tabs, extending
2 tabs from said first and second sides, whereby said cover may be disengaged from or engaged
3 with said microplate by displacing said longitudinal tabs laterally outwardly or inwardly to move
4 said projections away from or beneath said bottom edges of said microplate.

1 15. (Previously Presented): A cover assembly for a microplate, said assembly comprising:
2 a layer of compressible material shaped and dimensioned to removably seal a plurality of
3 a microplate's well openings;
4 a pressure plate disposed on said layer of material for dispersing a compressive force in a
5 generally uniform manner across said layer; and
6 a cover having a top and first and second sides, said sides extending downwardly from
7 the outer edges of said top and including projections that extend beneath the bottom edges of said
8 microplate, said top bowing upwardly from a central portion thereof to said sides, whereby said
9 top provides a resilient force that bears downwardly on said pressure plate and upwardly on the
10 bottom edges of said microplate.

1 16. (Previously Presented): The assembly of claim 15 including longitudinal tabs, extending
2 from said first and second sides, whereby said cover may be disengaged from, or engaged with
3 said microplate by displacing said longitudinal tabs laterally outwardly or inwardly to move said
4 projections away from or beneath said bottom edges of said microplate.

1 17. (Previously Presented): The assembly of claim 15 including:
2 a plurality of vertical tabs, generally perpendicular to said top, extending downward from
3 said projections; and
4 a plurality of recesses in said assembly that register with said vertical tabs, whereby a
5 plurality of cover assemblies can be stacked, with the vertical tabs on a cover extending into the
6 recesses of a cover assembly that is disposed beneath.